

Product EOL Announcement

The Product EOL Announcement signifies that a product series has entered the final phase of the Ecliptek Product Life Cycle, and serves as advance notice of product termination per the Ecliptek End of Life (EOL) policy.

Ecliptek Corporation announces End of Life initiation for the following product series with the intent of discontinuing its availability.

EOL Series	Description
ES51F5	5.0Vdc 14-Pin DIP Clipped Sinewave TCXO

EOL Timeline

The last date Ecliptek will accept orders (Stage 2) and the last date orders may be scheduled for shipment (Stage 3) are listed in the table below.

Stage 1 EOL Announce Date	Stage 2 Last Date to Order	Stage 3 Last Date to Ship
10-May-2011	28-February-2012	31-May-2012

Alternative Products

In order to fulfill your requirements beyond this product's discontinuation, we invite you to evaluate alternative Ecliptek products. Because this series does not have a recommended alternative Ecliptek product series, please contact one of our Global Customer Support Executives to assist you with finding the best Ecliptek product for your application.

Automated EOL Notification

Ecliptek offers automated notification of Product EOL Announcements. Place part numbers for which you'd like to receive EOL Notifications into your personalized [Parts List](#) on our website and we'll email you when EOL is announced.

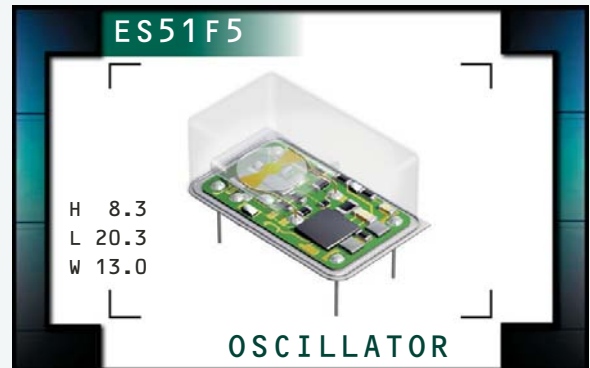
Please do not hesitate to contact us if you have any questions or need further assistance.

Ecliptek Global Customer Support Team
(800) 433-1280 x300
customersupport@ecliptek.com

All product warranties for discontinued products will be honored in full according to Ecliptek [Terms and Conditions of Sale](#).

ES51F5 Series

- Temperature Compensated Crystal Oscillators (TCXO)
- Clipped Sinewave Output
- +5.0V Supply Voltage
- Internal Mechanical Trim Function
- External Voltage Control Option
- Custom Lead Length & Gull Wing Options
- 14 pin DIP Metal Package



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range		9.600MHz to 44.736MHz
Operating Temperature Range		See Table 1
Storage Temperature Range		-55°C to 125°C
Supply Voltage (V_{DD})		5.0V _{DC} ±5%
Input Current	Measured at Steady State at 25°C, at Nominal V_{DD} , at Nominal V_C	10mA Maximum
Frequency Stability	vs. Initial Frequency Tolerance vs. Operating Temperature Range vs. Input Voltage ($V_{DD} \pm 5\%$) vs. Load ($\pm 10\%$)	±1.0ppm (at Nominal V_{DD} and V_C , at 25°C) See Table 1 (at Nominal V_{DD} and V_C) ±0.3ppm Maximum ±0.2ppm Maximum
Aging (at 25°C)		±1ppm / year Maximum
Output Voltage		1.0V _{p-p} Minimum Clipped Sinewave
Load Drive Capability		10kOhms//10pF
Control Voltage Range		0.0V _{DC} to V_{DD}
Control Voltage (External)	Positive Transfer Characteristic	2.5V _{DC} ±2.0V _{DC}
Frequency Deviation	Referenced to F_0 at $V_C = 2.5V_{DC}$, $V_{DD} = 5.0V_{DC}$	±7ppm Minimum, ±20ppm Maximum
Linearity		±10% Maximum
Internal Trim	Measured at 25°C, $V_{DD} = 5.0V_{DC}$, $V_C = 2.5V_{DC}$	±3ppm Minimum (Top Access)
Input Impedance		10kOhms Typical
Phase Noise (at 19.440MHz)	Measured at 25°C, at Nominal V_{DD} , at Nominal V_C	
	at 10Hz Offset	-70dBc/Hz Typical
	at 100Hz Offset	-100dBc/Hz Typical
	at 1kHz Offset	-130dBc/Hz Typical
	at 10kHz Offset	-140dBc/Hz Typical
	at 100kHz Offset	-145dBc/Hz Typical

PART NUMBERING GUIDE

ES51F5 G 15 A V - 12.800M - G

INITIAL TOLERANCE
G=±1.0ppm Maximum

FREQUENCY STABILITY
Two Digit Code Per Table 1

OPERATING TEMP. RANGE
One Letter Code Per Table 1

AVAILABLE OPTIONS

Blank=None
 CB=Cut Leads to 2.540 ±0.500 (0.100" ±0.020")
 CC=Cut Leads to 3.175 ±0.500 (0.125" ±0.020")
 CD=Cut Leads to 3.810 ±0.500 (0.150" ±0.020")
 CE=Cut Leads to 4.445 ±0.500 (0.175" ±0.020")
 G=Full Size Gull Wing

FREQUENCY

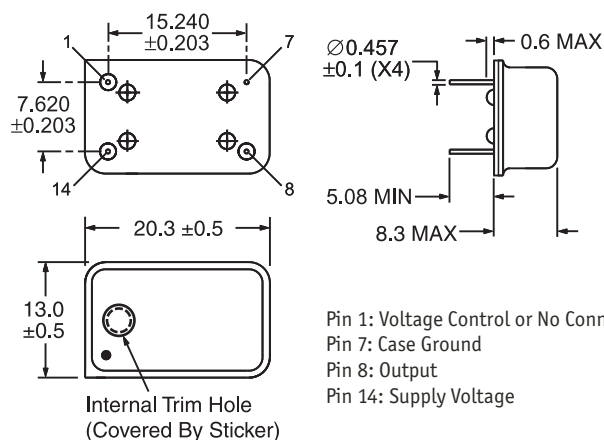
EXTERNAL TRIM

N=None (No Connection on Pin 1)
 V=Voltage Control on Pin 1

TABLE 1: PART NUMBERING CODES

Operating Temperature Range	Code	Frequency Stability			
		X = Available from 9.600MHz to 32.768MHz Y = Available at any Frequency			
		±1.5ppm	±2.0ppm	±3.0ppm	±5.0ppm
		15	20	30	50
0°C to +50°C	A	Y	Y	Y	Y
0°C to 70°C	B	X	Y	Y	Y
-20°C to +70°C	C		X	Y	Y
-30°C to +75°C	D			Y	Y
-40°C to +85°C	E			X	Y

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: XX.XXX M
 M=MHz
 Frequency (5 Digits Maximum + Decimal)

Line 3: XX Y ZZ
 Week of Year
 Last Digit of Year
 Ecliptek Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
Fine Leak Test	MIL-STD-883, Method 1014, Condition A (Internal Crystal Only)
Gross Leak Test	MIL-STD-883, Method 1014, Condition C (Internal Crystal Only)
Mechanical Shock	MIL-STD-202, Method 213, Condition C
Vibration	MIL-STD-883, Method 2007, Condition A
Lead Integrity	MIL-STD-883, Method 2004
Solderability	MIL-STD-883, Method 2002
Temperature Cycling	MIL-STD-883, Method 1010
Resistance to Soldering Heat	MIL-STD-883, Method 210
Resistance to Solvents	MIL-STD-883, Method 215

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES ES51F5	PACKAGE 14 pin DIP	VOLTAGE 5.0V	CLASS OS3C	REV. DATE 06/04
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